

REMARKS

In the foregoing claim amendments, claims 7, 8, 9, 10, 27, 32, 33, 34, 35, 36 and 53 have been amended. Now pending in the application are claims 1-55, of which claims 1, 27 and 53-55 are independent. Claims 9-13 and 35 are objected to, and have no art rejections. The following comments address all stated grounds for rejection, and the Applicants respectfully submit that the presently pending claims, as identified above, are now in a condition for allowance.

Objection to Claims 8, 9, 10, 27, 32, 33, 34, 35, 36 and 53

Claims 8, 9, 10, 27, 32, 33, 34, 35, 36 and 53 are objected to because there is comma at the end of the line or no period at the end of the claim. In the foregoing claim amendments, Applicants have amended claims 7, 8, 9, 10, 27, 32, 33, 34, 35, 36 and 53 to address the informalities. No new matter has been introduced. In light of the foregoing claim amendments, Applicants request the Examiner to reconsider and withdraw the objection to the claims.

Rejection of Claims 1-8, 14-20, 22-26 and 53-55 Under 35 U.S.C. §103

Claims 1-8, 14-20, 22-26 and 53-55 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,926,775 (“Brumley”) in view of U.S. Patent No. 5,627,998 (“Mondrik”). Applicants respectfully traverse this rejection for the following reasons.

Applicants respectfully submit that Brumley and Mondrik fail to teach or suggest providing *a command interpreter for generating a command for the control instrument that is not recognized in the driver*, as recited in claim 1. The Examiner asserts in the office Action that Brumley teaches this limitation of the claimed invention. See the Office Action, page 3, lines 4-6. Applicants respectfully disagree.

Independent claim 1 is directed to a method for communicating with one or more control instruments. The method provides a common communication interface for communicating with a control instrument via a driver for driving hardware of the control instrument. The common communication interface includes a command interpreter for generating a command for the control instrument that is not recognized in the driver. The command for the control instrument

generated from the command interpreter is *converted* to a command for the control instrument that is *recognized* in the driver. Claims 2-8, 14-20 and 22-26 depend upon claim 1. Claim 55 is a medium claim that parallels claim 1. Claims 53 and 54 recite similar limitations.

Brumley teaches instantiating a DAQ device object corresponding to a DAQ device. See Brumley, Figs. 3 and 4. Brumley also teaches that the DAQ device object creates the interpreter and the mini-driver primitives. See Brumley, Fig. 4, steps 208 and 212. In Brumley, the DAQ device object receives a call from a DAQ user application, and forwards the call to a proper interpreter. See Brumley, Fig. 5, steps 234 and 236. Brumley further teaches that the interpreter performs hardware independent functions, and calls one or more driver primitives to accomplish the hardware-related aspect of the call. See, Brumley, Fig. 6, steps 238 and 240. In Brumley, the call made by the interpreter is directly recognized in the driver primitives so that the primitives perform the hardware-related functions in response to the interpreter's call. Brumley does not teach that the interpreter generates a call or calls that are not recognized in the driver primitives. Consequently, Brumley does not teach a command interpreter for generating a command for the control instrument that is not recognized in the driver, as recited in the claimed invention.

Additionally, Applicants submit that Brumley and Mondrik fail to teach or suggest the limitation of *converting the command for the control instrument generated from the command interpreter to a command for the control instrument that is recognized in the driver*, as recited in claims 1, 54 and 55. The Examiner asserts in the office Action that Brumley teaches this limitation. See the Office Action, page 3, lines 16-20. Applicants respectfully disagree with the Examiner's position.

Brumley teaches that the interpreter converts a call made to a legacy API into a plurality of calls to mini-driver primitives. See Brumley, column 16, lines 50-52. Brumley also teaches that the interpreter is the module which provides the run-time translation layer from the high-level interface to the low-level interface to different driver primitives. See Brumley, column 25, lines 60-63. Brumley further teaches that the interpreter executes on the top of the mini-driver primitives and operates to convert from a legacy user interface to the low level programming interface provided by the respective mini-driver primitives. See Brumley, column 4, lines 18-25. In Brumley, the interpreter provides low-level interfaces to the driver primitives so that the call

made by the interpreter is recognized in the driver primitives. Therefore, there is no need in Brumley to convert the call made by the interpreter to the driver primitives to a call that can be recognized in the driver primitives.

In contrast, the claimed invention provides a command interpreter for generating a command that is not recognized in the driver. In the claimed invention, the command generated from the command interpreter is converted by, for example, an adaptor to a command that is recognized in the driver. Brumley does not teach that the call made by the interpreter to the driver primitives is converted to a call that is recognized in the driver primitives. Brumley therefore fails to teach converting the command for the control instrument generated from the command interpreter to a command for the control instrument that is recognized in the driver, as recited in the claimed invention.

The Examiner cites Mondrik to provide teachings that the DAQ device is a control instrument. Applicants submit that Mondrik, alone or in combination with Brumley, also fails to teach or suggest the limitations of the claimed invention discussed above. In light of the foregoing arguments, Applicants respectfully submit that the Brumley and Mondrik fail to teach or suggest all of the limitations of claims 1 and 53-55. Claims 2-8, 14-20 and 22-26, which depend upon claim 1, are not rendered obvious over the cited prior art references. Applicants therefore request the Examiner reconsider and withdraw the rejection of claims 1-8, 14-20, 22-26 and 53-55 under 35 U.S.C. §103(a), and pass the claims to allowance.

Rejection of Claim 21 Under 35 U.S.C. §103

Claim 21 is rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,926,775 ("Brumley") in view of U.S. Patent No. 5,627,998 ("Mondrik"), and further in view of U.S. Patent No. 5,764,546 ("Bryant"). Applicants respectfully traverse this rejection for the following reasons.

Claim 21 depends upon independent claim 1 and, thus, incorporates the limitations of Claim 1. The Examiner cites Bryant to provide teachings for the limitations added in the dependent claim 21. Applicants submit that Bryant also fails to teach or suggest the limitations of claim 1 discussed above in connection with the rejection of claim 1. Bryant relates to

configuring channels in a DAQ device. In Bryant, users can create channel configurations which include information for a respective DAQ hardware channel. Bryant, however, does not teach that the command interpreter generates a command that is not recognized in the driver and the command generated from the command interpreter is converted to a command that is recognized in the driver, as recited in claim 1.

In light of the foregoing arguments, Applicants respectfully submit that Brumley, Mondrik and Bryant fail to teach or suggest all of the limitations of claim 1. Claim 21, which depends upon claim 1, is not rendered obvious over the cited prior art references. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claim 21 under 35 U.S.C. §103(a), and pass the claim to allowance.

Rejection of Claims 27-34, 40-46 and 48-52 Under 35 U.S.C. §103

Claim 27-34, 40-46 and 48-52 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,926,775 (“Brumley”) in view of U.S. Patent No. 5,627,998 (“Mondrik”), and further in view of U.S. Patent No. 5,740,801 (“Branson”). Applicants respectfully traverse this rejection for the following reasons.

Applicants respectfully submit that Brumley, Mondrik and Branson fail to teach or suggest *a command interpreter for generating a command for the control instrument that is not recognized in the driver*, as recited in claim 27. The Examiner asserts in the office Action that Brumley teaches the command interpreter of the claimed invention. See the Office Action, page 12, lines 1-4. Applicants respectfully disagree.

Independent claim 27 is directed to a system for communicating with one or more control instruments. The system includes a common communication interface for communicating with a control instrument via a driver for driving hardware of the control instrument. The common communication interface includes *a command interpreter* for generating a command for the control instrument that is not *recognized* in the driver. The common communication interface also includes *an adaptor* for converting the command for the control instrument generated from the command interpreter to a command for the control

instrument that is *recognized* in the driver. Claims 28-34, 40-46 and 48-52 depend upon claim 27.

Brumley teaches an interpreter disposed between a DAQ device object and mini-driver primitives. See Brumley, Fig. 3. Brumley also teaches that the interpreter receives a call from the DAQ device object, and calls one or more primitives to accomplish the hardware-related aspect of the call. See, Brumley, Fig. 6, steps 238 and 240. Brumley further teaches that the interpreter converts a call made to a legacy API into a plurality of calls to mini-driver primitives. See Brumley, column 16, lines 50-52. In Brumley, the call made by the interpreter is recognized in the driver primitives so that the primitives perform the hardware-related functions in response to the interpreter's call. Brumley does not teach that the call from the interpreter is not recognized in the driver primitives. Consequently, Brumley does not teach a command interpreter for generating a command for the control instrument that is not recognized in the driver, as recited in the claimed invention.

Additionally, Applicants submit that Brumley, Mondrik and Branson fail to teach or suggest *an adaptor for converting the command for the control instrument generated from the command interpreter to a command for the control instrument that is recognized in the driver*, as recited in claim 27. The Examiner asserts in the office Action that Branson teaches the adaptor of the claimed invention at column 21, lines 24-35. See the Office Action, page 12, line 20. Applicants respectfully disagree.

Branson teaches a system for acquiring images during a medical procedure and using the acquired images. In FIG. 2, Branson teaches that signals from the remote control (48) are interpreted by a command interpreter in the remote control adapter (34c). Branson also teaches that the command interpreter relays the appropriate command (e.g., for record, stop, pause and play) to the VCR subsystem (34m), which in turn transmits the commands to VCR (66). Branson teaches that remote control adapter (34c) includes a command interpreter that interprets the signals from the remote control (48) and forwards a command to the VCR subsystem (34m). Branson, however, does not teach that the remote control adapter (34c) converts a command generated from the command interpreter. Accordingly, Branson does not teach an adaptor for converting the command for the control instrument generated from the command interpreter to a

command for the control instrument that is recognized in the driver, as recited in the claimed invention.

The Examiner cites Mondrik to provide teachings that the DAQ device is a control instrument. Applicants submit that Mondrik also fails to teach or suggest the command interpreter and the adaptor of the claimed invention. In light of the foregoing arguments, Applicants respectfully submit that the Brumley, Mondrik and Branson fail to teach or suggest all of the limitations of claim 27. Claims 28-34, 40-46 and 48-52, which depend upon claim 27, are not rendered obvious over the cited prior art references. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claims 27-34, 40-46 and 48-52 under 35 U.S.C. §103(a), and pass the claims to allowance.

Rejection of Claims 36-39 and 47 Under 35 U.S.C. §103

Claim 36-39 and 47 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,926,775 ("Brumley") in view of U.S. Patent No. 5,627,998 ("Mondrik"), and further in view of U.S. Patent No. 5,740,801 ("Branson"), and further in view of U.S. Patent No. 5,764,546 ("Bryant"). Applicants respectfully traverse this rejection for the following reasons.

Claims 36-39 and 47 depends upon independent claim 27. The Examiner cites Bryant to provide teachings for the limitations added in the dependent claims. Applicants submit that Bryant also fails to teach or suggest the command interpreter and the adaptor recited in claim 27. Bryant relates to configuring channels in a DAQ device. In Bryant, users can create channel configurations which include information for a respective DAQ hardware channel. Bryant, however, does not teach the command interpreter for generating a command that is not recognized in the driver, and the adaptor for converting the command generated from the command interpreter to a command that is recognized in the driver, as recited in claim 27.

In light of the foregoing arguments, Applicants respectfully submit that Brumley, Mondrik, Branson and Bryant fail to teach or suggest all of the limitations of claim 27. Claims 36-39 and 47, which depend upon claim 27, are not rendered obvious over the cited prior art references. Applicants therefore request the Examiner to reconsider and withdraw the rejection of claims 36-39 and 47 under 35 U.S.C. §103(a), and pass the claim to allowance.

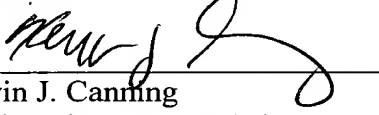
Conclusion

In view of above, Applicants believe the pending application is in condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue. If, however, the Examiner considers that further obstacles to allowance of these claims persist, we invite a telephone call to Applicants' representative.

Applicants believe no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. MWS-065 from which the undersigned is authorized to draw.

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Respectfully submitted,

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